

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (original) A routing and switching apparatus comprising: a switching fabric; a matrix of switching and routing elements, at least some of said elements being interconnected by said switching fabric; and router control providing control for said switching fabric, wherein said apparatus has both cross-connect and routing functionality.
2. (original) The apparatus as claimed in claim 1 wherein said apparatus can support GMPLS.
3. (original) The apparatus as claimed in claim 1 wherein said apparatus further comprises an IP-based layer-3 virtual router.
4. (original) The apparatus as claimed in claim 2 wherein said apparatus can provide layer-3 VPN services.
5. (original) The apparatus as claimed in claim 2 wherein said apparatus can perform layer-3 forwarding via a network processor.
6. (original) The apparatus as claimed in claim 4 wherein said apparatus can exist both physically and virtually with in a particular network.
7. (original) The apparatus as claimed in claim 4 further comprising a router capable of forwarding packets according to a label switching algorithm.
- 8-12 (cancelled)

13. (original) A method for operating a router comprising the steps of: using a primary router to direct an electrical signal to a virtual router; and using said virtual router to perform virtual router functions, wherein said virtual router runs GMPLS.
14. (original) The method as claimed in claim 13 further comprising the step of using said primary router to direct said electrical signal from said virtual router.
15. (original) The method as claimed in claim 14 wherein said primary router controls a subset of a switching fabric.
16. (original) The method as claimed in claim 15 wherein said virtual router controls another subset of said switching fabric.
17. (original) The method as claimed in claim 16 wherein said virtual router supports a combination of at least two of layer-2 switching Ethernet, layer-2 switching MPLS, and layer-3 forwarding via a network processor.
18. (original) The method as claimed in claim 17 wherein said virtual router is embedded in a label switch router.
19. (original) The method as claimed in claim 18 wherein said primary router runs GMPLS.
20. (original) The method as claimed in claim 19 wherein said electrical signal is STS-48.